AMENDMENTS TO THE CLAIMS

1   1. (currently amended) A method of constructing a data pattern ~~in a bit-error-rate test~~

2   comprising:

3   calculating an actual value using selected data of the data pattern, the data

4   pattern comprises a data loop, the actual value is a function of the content of a preceding

5   frame of the data loop;

6   determining a desired value of the actual-value calculation using the selected

7   data, the desired value is stored in a first frame of the data loop;

8   determining a correction value to be applied to a portion of the selected data;

9   performing an operation using the correction value and the portion of the

10   selected data, thereby yielding a replacement value; and

11   making the portion of the selected data equal to the replacement value, thereby

12   yielding adjusted selected data.

1   2. (cancel)

1   3. (currently amended) The method of claim [[2]] 1, wherein the data pattern

2   comprises binary data and the step of determining the correction value comprises performing

3   an exclusive-Or operation of the actual value and the desired value.

1   4. (original) The method of claim 3, wherein the step of performing the operation

2   comprises performing an exclusive-Or operation of the correction value and the portion of the

3   selected data.

1   5. (original)   The method of claim 4, wherein the data pattern is used for time-

2   domain testing.

1   6. (original)   The method of claim 5, wherein the time-domain testing comprises bit-

2   error-rate testing.

1   7. (original)   The method of claim 4, wherein the data pattern is used for frequency-

2   domain testing.

1   8. (original)   The method of claim 7, wherein the frequency-domain testing

2   comprises spectrum analysis.

1   9. (original)   The method of claim 4, wherein the data pattern comprises at least one

2   Synchronous Optical Network (SONET) frame.

1   10. (original) The method of claim 9, wherein the step of calculating comprises

2   performing a Bit Interlace Parity (BIP) calculation.

1   11. (original) The method of claim 10, wherein:

2   the data pattern comprises at least a last frame and a first frame;

3   the desired value is stored in the first frame;

4   the actual value is calculated on the last frame.

1   12. (original) The method of claim 10, wherein the data pattern comprises a plurality

2   of frames and a plurality of the plurality of frames include identical B bytes.

1   13. (original) The method of claim 11, wherein the last frame and the first frame are

2   the same frame.

1   14. (original) The method of claim 10, wherein the desired value comprises at least

2   one of a SONET B2 byte, a SONET B3 byte, and a SONET B1 byte.

1   15. (original) The method of claim 9, wherein the number of frames in the data

2   pattern equals one.

1   16. (original) The method of claim 4, wherein the data pattern comprises at least one

2   Synchronous Digital Hierarchy (SDH) frame.

1   17. (original) The method of claim 16, wherein the step of calculating comprises

2   performing a Bit Interlace Parity (BIP) calculation.

1   18. (original) The method of claim 17, wherein:

2   the data pattern comprises at least a last frame and a first frame;

3   the desired value is stored in the first frame;

4   the actual value is calculated on the last frame.

1   19. (original) The method of claim 17, wherein the data pattern comprises a plurality

2   of frames and a plurality of the plurality of frames include identical B bytes.

1   20. (original) The method of claim 18, wherein the last frame and the first frame are

2   the same frame.

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1   21. (original) The method of claim 17, wherein the desired value comprises at least

2   one of a SDH B2 byte, a SDH B3 byte, and a SDH B1 byte.

1   22. (original) The method of claim 1, further comprising:

2   calculating a second actual value using second selected data of the data

3   pattern;

4   determining a second desired value of the second-actual-value calculation

5   using the second selected data;

6   determining a second correction value to be applied to a portion of the second

7   selected data;

8   performing an operation using the second correction value and the portion of

9   the second selected data, thereby yielding a second replacement value; and

10   making the portion of the second selected data equal to the second

11   replacement value, thereby yielding adjusted second selected data.

1   23. (original) The method of claim 22, wherein the step of determining the second

2   correction value comprises performing an exclusive-Or operation of the second actual value

3   and the second desired value.

1   24. (original) The method of claim 23, wherein the step of performing the operation

2   using the second correction value comprises performing an exclusive-Or operation of the

3   second correction value and the portion of the second selected data.

1   25. (previously presented)   The method of claim 24, wherein the second selected

2   data and the portion of the second selected data are mutually exclusive.

1   26. (original) The method of claim 1, wherein the selected data is selected from a

2   single frame of the data pattern.

1   27. (original) The method of claim 1, further comprising calculating an adjusted

2   actual value using the adjusted selected data, wherein the adjusted actual value equals the

3   desired value.

1   28. (original) The method of claim 1, wherein the step of determining the correction

2   value comprises performing an exclusive-Or operation of the actual value and the desired

3   value.

1   29. (original) The method of claim 1, wherein the step of performing the operation

2   comprises performing an exclusive-Or operation of the correction value and the portion of the

3   selected data.

1   30. (original) An error-rate test system comprising:

2   a pattern generator adapted to input a finite data pattern comprising at least

3   one frame to a device under test, wherein the device under test sequentially processes and

4   outputs data of the input finite data pattern;

5   wherein a correction value comprises the result of an exclusive-Or operation

6   of an actual value and a desired value of a calculation performed on a selected portion of at

7   least one frame of the finite data pattern;

8   wherein a replacement value comprises an exclusive-Or operation of the

9   correction value and a portion of the selected portion; and

6

10   wherein the portion of the selected portion is made equal to the replacement

11   value.

1   31. (original) The system of claim 30, wherein the data pattern comprises at least one

2   Synchronous Optical Network (SONET) frame.

1   32. (original) The system of claim 31, wherein the actual value comprises the result

2   of a Bit Interlace Parity (BIP) calculation.

1   33. (original) The system of claim 32 wherein:

2   the data pattern comprises at least a last frame and a first frame;

3   the desired value is stored in the first frame;

4   the actual value is calculated on the last frame.

1   34. (original) The system of claim 30, wherein the data pattern comprises a plurality

2   of frames and a plurality of the plurality of frames include identical B bytes.

1   35. (original) The system of claim 33, wherein the last frame and the first frame are

2   the same frame.

1   36. (original) The system of claim 30, wherein the desired value comprises at least

2   one of a SONET B2 byte, a SONET B3 byte, and a SONET B1 byte.

1   37. (original) The system of claim 30, wherein the number of frames in the data

2   pattern equals one.

1   38. (original) The system of claim 30, wherein the data pattern comprises at least one

2   Synchronous Digital Hierarchy (SDH) frame.

1   39. (original) The system of claim 38, wherein the actual value comprises the result

2   of a Bit Interlace Parity (BIP) calculation.

1   40. (original) The system of claim 39, wherein:

2   the data pattern comprises at least a last frame and a first frame;

3   the desired value is stored in the first frame;

4   the actual value is calculated on the last frame.

1   41. (original) The system of claim 38, wherein the data pattern comprises a plurality

2   of frames and a plurality of the plurality of frames include identical B bytes.

1   42. (original) The system of claim 40, wherein the last frame and the first frame are

2   the same frame.

1   43. (original) The system of claim 30, wherein the desired value comprises at least

2   one of a SDH B2 byte, a SDH B3 byte, and a SDH B1 byte.

1   44. (original) The system of claim 30, wherein:

2   a second actual value is calculated using a second selected portion of the at

3   least one frame;

4   a second desired value of the second-actual-value calculation is determined

5   using the second selected portion;

6   a second correction value to be applied to a portion of the second selected

7   portion is determined;

8   an operation is performed using the second correction value and the portion of

9   the second selected portion, the operation using the second correction value and the portion

10   of the second selected portion yielding a second replacement value; and

11   the portion of the second selected data is made equal to the second

12   replacement value, thereby yielding an adjusted second selected portion.

1   45. (original) The system of claim 44, wherein the determination of the second

2   correction value comprises performing an exclusive-Or operation of the second actual value

3   and the second desired value.

1   46. (original) The system of claim 45, wherein the operation using the second

2   correction value and the portion of the second selected portion comprises performing an

3   exclusive-Or operation of the second correction value and the portion of the second selected

4   portion.

1   47. (original) The system of claim 46, wherein the selected portion and the portion of

2   the second selected portion are mutually exclusive.

1   48. (original) The system of claim 30, wherein the selected portion is selected from a

2   single frame of the data pattern.

1   49. (original) The system of claim 30, wherein an adjusted actual value using the

2   adjusted selected data is calculated and the adjusted actual value equals the desired value.